

## SEQUENCE LISTING PART OF THE DESCRIPTION

## pONY8.1Z MLVHyb (SEQ ID NO 10)

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**pONY8.3G FB29 – (SEQ ID No 45)**

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**pONY8.3G FB29 + (SEQ ID No 46)**

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**pONY8.3GPGK – (SEQ ID No 47)**

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SEQ ID No 51

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**pONY8ZA CMVHyb (SEQ ID N 52)**

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## PEsynGP (SEQ ID No 53)

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### MLV construct CZCG (SEQ ID No 55)

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 CGGTGAGTGCCTGCAAAGCCTGCAACCTGGCGAGGGTGTGGCCAGCCTTGTGGAGC  
 CCAGACCGTGTGAGCCCTGCCGGACAGCGTACGTTCTCCAGCTGGTGGAGCGCGAC  
 CGAGCCGTGCAAGCCGTGCAACCGAGTGCCTGGGGCTCCAGAGCATGTCGGCGCCGT  
 30 GGAGGCCGACGACGCCGTGTGCCCTGCCTACGGCTACTACCAGGATGAGACGACTGG  
 GCGCTGCGAGGCCTGCCGTGTGCGAGGCCGCTGGGCCCTGTGTTCTCCTGCCAGGA  
 CAAGCAGAACACCGTGTGCGAGGAGTGCCGACGGCACGTATCCGACGAGGCCAACCA  
 CGTGGACCCGTGCCCTGCAACCGTGTGCGAGGACACCAGCGCCAGCTCCGCGAGTG  
 CACACGCTGGCCGACGCCAGTGCAGGCCGAGTGGATTACACGGTCCAC  
 35 ACCCCCCAGAGGGCTGGACAGCACAGCCCCCAGCACCCAGGAGCCTGAGGCCACCTCC  
 ACAAGACCTCATAGCCAGCACGGTGGCAGGTGTTGGTACAGTGTGGCAGCTCCCA  
 GCCCGGGTGACCGAGGCACCACCGACAACCTCATCCCTGTCTATTGCTCCATCCTGG  
 TGCTGTGGTTGTGGGCCCTGTGCCCTACATAGCCTTAAGAGGTGGAACAGCTGCTGAGT  
 CGACTCTAGAGGATCCCCAACATCGATAAAAATAAAAGATTATTAGTCTCCAGAAAAA  
 40 GGGGGGAATGAAAGACCCCACCTGTAGGTTGGCAAGCTAGCTAACGCCATT  
 CAAGGCATGGAAAAAAATACATAACTGAGAATAGAGAAGTTAGCAGATCAAGGTCAAGGAACAGA  
 TGGAACAGCTGAATATGGCCAAACAGGATATCTGTGGTAAGCAGTCTGCCCGGCTC  
 AGGGCCAAGAACAGATGGAACAGCTGAATATGGCCAAACAGGATATCTGTGGTAAGCAG  
 TTCTGCCCGGCTCAGGCCAGAACAGATGGTCCCAGATGCCGCTCAGCCCTCAGCA  
 45 GTTTCTAGAGAACCATCAGATGTTCCAGGGTGCCCAAGGACCTGAAATGACCTGT  
 CTTATTGAACTAACCAATCAGTTGCTCTCGCTTCTGCTGCTCCGATTGACTGAGT  
 AGCTCAATAAAAGAGGCCACAACCCCTACTGGGCCAGTCCCTCGATTGACTGAGT  
 CGCCCGGGTACCCGTGTATCCAATAAACCTCTTGCACTGAGTGCATCCGACTTGTGGTCTG  
 CTGTTCTTGGAGGGTCTCTGTGAGTGAATGACTACCCGTCAAGCAGGGGTCTTCATT  
 50 TGGGGCTCGTCCGGGATCGGGAGACCCCTGCCAGGGACCCAGCACCCACCGGGAG  
 GTAAGCTGGCTGCCCTCGCGTTGGTGTGACGGTAAAAACCTCTGACACATGCAGCT  
 CCCGGAGACGGTCACAGCTGTGTAAGCGGATGCCGGAGCAGACAAGCCGTCAAGGG  
 CGCGTCAGCGGGTGTGGCGGGTGTGGCGGCCAGCCATGACCCAGTCACGTAGCGATAG  
 CGGAGTGTATACTGGCTTAACATGCGGCACTAGAGCAGATTGACTGAGAGTGCACCAT  
 55 ATGCGGTGTGAAATACCGCACAGATGCGTAAGGGAGAAATACCGCATCAGGCCCTTCC  
 GCTTCTCGCTCACTGACTCGCTCGCCTCGGTCGTTGGCTGCCGAGCGGTATCAGCT  
 CACTCAAAGGCCGTTAACCGGTATCCACAGAACATCAGGGATAACGCAGGAAAGAACATG  
 TGAGCAAAGGCCAGAAAAGGCCAGGAACCGTAAAAGGCCGTTGCTGGCGTTTTC  
 CATAGGCTCCGCCCTGACGAGCATCACAAAATCAGCTCAAGTCAGAGGTGGCG  
 60 AACCCGACAGGACTATAAGATACCAGGCCTTCCCCCTGGAAGCTCCCTGCGCTCT

CCTGTTCCGACCCCTGCCGCTTACCGGATACCTGTCGCCCTTCTCCCTTCGGGAAGCGTG  
 GCGCTTCTCATAGCTACGCTGTAGGTATCTCAGTCGGTGTAGGTCGTTCGCTCCAAG  
 CTGGGCTGTGTGCACGAACCCCCCGTTCAGCCGACCGCTGCCCTTATCCGTAACAT  
 CGTCTTGAAGTCCAACCCGTAAGACACGACTTATCGCACTGGCAGCAGCCACTGTAAC  
 5 AGGATTAGCAGAGCGAGGTATGTAGGCGGTACAGAGTTCTGAAGTGGTGGCCTAAC  
 TACGGCTACACTAGAAGGACAGTATTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTC  
 GGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTT  
 TTTGTTGCAAGCAGCAGATTACCGCAGAAAAAAAGATCTAAGAAGATCCTTGATC  
 10 TTTCTACGGGGTCTGACGCTCAGTGGAACGAAACTCACGTTAAGGGATTGGTCATG  
 AGATTATCAAAAAGGATCTCACCTAGATCCTTTAAATTAAAATGAAGTTAAATCA  
 ATCTAAAGTATATGAGTAAACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCA  
 CCTATCTCAGCGATCTGCTATTGCTCATCCATAGTTGCTGACTCCCCGTCGTAG  
 ATAACCTACGATAACGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATAACCGCAGAC  
 15 CCACGCTCACCGGCTCCAGATTATCAGCAATAAACAGCAGCCGGAAGGGCGAGCGC  
 AGAAGTGGTCTGCAACTTATCCGCTCCATCCAGTCTATTAAATTGTTGCCGGGAAGCT  
 AGAGTAAGTAGTCGCCAGTTAATAGTTGCGCAACGTTGCTGCCATTGCTGAGGCAATC  
 GTGGTGTACGCTCGTGTGTTGGTATGGCTTATTGCTCAGCTCCGGTTCCCAACGATCAAGG  
 CGAGTTACATGATCCCCATGTTGCAAAAAAGCGGTTAGCTCCTCGGTCTCCGATC  
 GTTGTCAAGAAGTAAGTGGCCGAGTGTATCACTCATGGTATGGCAGCACTGCATAAT  
 20 TCTCTTACTGTCTGCACTTATCCGCTTAAGATGCTTCTGTGACTGGTAGTACTCAACCAAG  
 TCATTCTGAGAATAGTGTATGCGCGACCGAGTTGCTCTTGCCCCGGTCATAACGGGAT  
 AATACCGGCCACATAGCAGAACTTTAAAGTGCTCATATTGAAAACGTTCTCGGG  
 CGAAAACCTCTCAAGGATCTTACCGCTGTTGAGATCCAGTTGATGTAACCACTCGTCA  
 CCCAAGTCTTCAAGGATCTTACCGATCTTACTTACCCAGCGTTCTGGTGAGCAAAAACAGGA  
 25 AGGCAAAATGCCGCAAAAAGGAATAAGGGCAGACCGAAATGTTGAATACTCATACTC  
 TTCTTTCAATATTATTGAAGCATTATCAGGGTATTGCTCATGAGCGGATAACATA  
 TTTGAATGTATTTAGAAAAATAACAAATAGGGTCCCGCGCACATTCCCGAAAAGTG  
 CCACCTGACGCTCAAGAAACATTATTATCATGACATTACCTATAAAATAGGCATAC  
 ACGAGGCCCTTCTGCTCGCGTTTCCGGTATGACGGTGAAAACCTCTGACACATGCAG  
 30 CTCCCGAGACGGTCACAGCTGTCTGTAAGCGGATGCCGGAGCAGACAAGCCGTCAG  
 GGCCTGAGCGGGTGTGGCGGGTGTGCGGGCTGGCTTAACATATGCCATCAGAGCAG  
 ATTGTACTGAGAGTGCACCATATGGACATATTGCTTAGAAGCGGCTACAATTAAAC  
 ATAACCTTATGTATCATACACATACGATTAGGTGACACTATAGAACTCGACTTAGAGT  
 CCGTTACATAACTACGGTAAATGGCCCGCTGGCTGACCGCCAACGACCCCCGCCAT  
 35 TGACGTCAATAATGACGTATGTTCCATAGTAACGCCAATAGGGACTTCCATTGACGTC  
 AATGGGTGGAGTATTACGGTAAACTGCCACTTGGCAGTACATCAAGTGTATCATATGC  
 CAAGTACGCCCTATTGACGTCATGACGGTAAATGGCCGCTGGCATTATGCCAGT  
 ACATGACCTTATGGACTTCTACTTGGCAGTACATCTACGTTAGTCATCGCTATTA  
 CCATGGTATGCGGTTTGGCAGTACATCAATGGCGTGGATAGCGGTTGACTCACGG  
 40 GATTTCAAGTCTCCACCCATTGACGTCAATGGGAGTTGTTGGCACCAAAATCAAC  
 GGGACTTCCAAAATGTCGTAACAACCTCCGCCCCATTGACGCAATGGCGGTAGCGTG  
 TACGGTGGGAGGTCTATATAAGCAGAGCTGTTAGTGAACCGCGCCAGTCTCCGATAG  
 ACTGCGTCCGCCGGTACCGTATTCCAAATAAGCCTCTTGCTGTTGATCCGAATCG  
 TGGTCTCGCTGTTCCCTGGGAGGGTCTCTGAGTGTAGTACTACCCACGACGGGGTC  
 45 TTTCATTGGGGCTCGTCCGGATTGGAGACCCCTGCCAGGGACCACCGACCCACCA  
 CCGGGAGGTAAAGCTGCCAGCAACTTATCTGTCTGCTGCTGATTGTCTAGTGTATGTT  
 TGATGTTATGCGCTCGTGTACTAGTTAGCTAATAGCTCTGTTATCTGGGGACCCCG  
 TGGTGGAACTGACGAGTTCTGAAACACCCGGCGCAACCCCTGGGAGACGTCCAGGGACTT  
 TGGGGGCCGTTTGTGGCCGACCTGAGGAAGGGAGTCATGTTGAACCGACCCGTC  
 50 AGGATATGTGGTTCTGGTAGGAGACGAGAAACCTAAACAGTTCCGCTCCGCTGAATT  
 TTGCTTCCGTTTGGAACCGAAGCCGCGCTTGTCTGCTGAGCGCTGCAGCATCGT  
 TCTGTGTTGCTCTGACTGTGTTCTGATTGCTGAAATAGGGCCAGACTGT  
 TACCACTCCCTTAAGTTGACCTTAGGTCACTGGAAAGATGTCGAGCGGATCGCTACAA  
 CCAGTCGGTAGATGTCAGAAGAGACGTTGG  
 55

## PLTRI xP (SEQ ID No 58)

60 GCTAGCATAACTCGTATAATGATGCTACGAAAGTTATTCTAGAGAACCATCAGATGT  
 TTCCAGGGTGCCCCAAGGACCTGAAATGACCTGTGCTTATTGAACTAACCAATCAGT

TCGCTTCTCGCTTCTGTCGCGCCTCTGCTCCCCGAGCTCAATAAAAGAGCCCCAAC  
 CCCTCACTCGGGCGCCAGTCTCCGATTGACTGAGTCGCCGGTACCCGTATCCAA  
 TAAACCTCTGCAAGTGCATCCGACTTGGTCTCGTGTTCCTGGGAGGGTCTCCTC  
 TGAGTGATTGACTACCCGTCAAGGGGGTCTTCATTGGGGCTCGTCCGGATCGGA  
 5 GACCCCTGCCAGGGACCACCGACCCACCGGGAGGTAAAGCTGGCTGCCTCGCGTT  
 TCGGTGATGACGGTGAAAACCTCTGACACATGCACTCCCGAGACGGTCACAGTTGTC  
 TGTAAAGCGATGCCGGAGCAGACAAGCCCGTCAAGGGCGCTCAGCGGGTGTGGCGGGT  
 GTCGGGCGCAGCCATGACCCAGTCACGTAAGCGATAGCGAGGTGTATACTGGCTTAAC  
 10 TGCGGCATCAGAGCAGATTGTAAGTGCACCATATGCGGTGTGAAATACCGCACAG  
 ATGCGTAAGGAGAAAATACCGCATCAGCGCTCTCCGCTTCCTCGCTCACTGACTCGCT  
 GCGCTCGGTGTTGGCTGCGGAGCGGTATCAGCTCACTCAAAGCGGTAAACCGTT  
 ATCCACAGAACAGGGATAACGCAAGGAAAGAACATGTGAGCAAAGGCCAGCAAAAGGC  
 CAGGAACCGTAAAAGGCCGCTGCTGGCTTTTCATAGGCTCCGCCCCCTGACGA  
 GCATCACAAAAATCGACGCTCAAGTCAGAGTGGCGAAACCCGACAGGACTATAAGATA  
 15 CCAGGCCTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCCTGCCGCTTAC  
 CGGATACCTGTCGCCCTTCTCCCTCGGGAGCGTGGCTTCTCATAGCTCACCGCTG  
 TAGGTATCTCAGTTGCTGTAGGTGCTGCTCCAAGCTGGCTGTGACGAACCCCC  
 CGTTCAGCCCCGACCGCTGCGCTTATCGGTAACTATCGTCTTGAGTCAACCCGGTAAG  
 ACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGT  
 20 AGGCGGTGCTACAGAGTTCTGAGTGGTGGCTAACTACGGTACACTAGAAGGACAGT  
 ATTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTCGGAAAAAGAGTTGGTAGCTCTG  
 ATCCGGCAAACAAACCCACCGCTGTTAGCGGTGGTTTTGTTGCAAGCAGCAGATTAC  
 GCGCAGAAAAAAAGGATCTCAAGAAGATCCTTGATCTTCTACGGGCTGACGCTCA  
 GTGGAACGAAAACACGTTAAGGGATTTGGTATGAGATTATCAAAAGGATCTCAC  
 25 CTAGATCTTTAAATAAAAATGAAGTTAAATCAATCTAAAGTATATGAGTAAC  
 TTGGTCTGACAGTTACCAATGCTTAATCAGTGGACCTATCTCAGCGATCTGTCTATT  
 TCGTTCATCCATAGTTGCTGACTCCCCGCTGTTAGATAACTACGATAACGGGAGGGCTT  
 ACCATCTGGCCCCAGTGTGCAATGATAACCGCAGACCCACGCTCACCGGCTCCAGATT  
 ATCAGCAATAAAACAGCCAGCCAGCGGAAGGGCCAGCGCAGAAGTGGTCTGCAACTTATC  
 30 CGCCTCCATCCAGTCTATTAAATTGTTGCCATTGCTGAGGCATCGTGGTGTACGCTCGTGTG  
 TAGTTGCGCAACGTTGCTGCCATTGCTGAGGCATCGTGGTGTACGCTCGTGTG  
 TATGGCTTCATTAGCTCCGGTCCCAACGATCAAGGCAGTTACATGATCCCCCATGTT  
 GTGCAAAAAGCGGTTAGCTCCTCGTCTCGATCGTGTGAGAAGTAAGTTGGCCGC  
 AGTGTATCACTCATGGTATGGCAGCACTGCATAATTCTTACTGTCATGCCATCCGT  
 35 AAGATGCTTTCTGTGACTGGTAGTACTCAACCAAGTCATTGAGAATAGTGTATGCG  
 GCGACCGAGTTGCTCTGCCGGCTCAACACGGATAATACCGGCCACATAGCAGAAC  
 TTAAAAAGTGTCTCATTTGGAAAACGTTCTCGGGCGAAAACCTCTCAAGGATCTTACC  
 GCTGTTGAGATCCAGTTGATGTAACCCACTCGCACCCACTGATCTCAGCATCTT  
 TACTTCACCGCGTTCTGGTGAGCAAAACAGGAAGGCAAAATGCCGAAAAAGGG  
 40 AATAAGGGCGACACGGAAATGTTGAATACTCATACTCTCCTTTCAATTATTGAAG  
 CATTATCAGGGTTATTGTCATGAGCGGATACATATTGAATGTATTAGAAAAATAA  
 ACAAAATAGGGGTTCCCGCGCACATTCCCCAAAAGTGCACCTGACGCTAAGAACCAT  
 TATTATCATGACATTAACCTATAAAATAGGCGTATCACGAGGCCCTTCGTCTCAAGA  
 ATTCAACCAAGATCACCGAAAACGTCTCCAAATGTTGCCCCCTCACACTCCAAATT  
 45 GCGGGCTCTGCCCTTAGACCACTCACCTATTCCCCACACTCACCGGAGGCCAAAGCC  
 GCGGCCCTCCGTTGCTTGAAGACCCACCGTAGGTGGCAA

### LTR plasmid (SEQ ID No 59)

GCTAGCTTAAGTAACGCCATTGCAAGGCATGGAAAAATACATAACTGAGAATAGAGAA  
 50 GTTCAGATCAAGGTCAAGGAACAGATGGAACAGCTGAATATGGCCAAACAGGGATATCTGT  
 GGTAAGCAGTTCTGCCCGGCTCAGGGCCAAGAACAGATGGAACAGCTGAATATGGCC  
 AACAGGGATATCTGTTAGCAGTTCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCC  
 CCAGATGCCGGTCCAGCCCTCAGCAGTTCTAGAGAACCATCAGATGTTCCAGGGTGC  
 CAAGGACCTGAAATGACCCCTGCGCTTATTGAACTAACCAATCAGTTGCTTCTCGCTT  
 55 CTGTTGCCGCTCTGCTCCCCGAGCTCAATAAAAGAGCCACAACCCCTCACTGGGG  
 CGCCAGTCCTCCGATTGACTGAGTCGCCCGGGTACCCGTGTATCCAATAACCCCTCTG  
 AGTTGATCCGACTTGTGGTCTCGCTGTTCTGGGAGGGTCTCCTCTGAGTGATTGACT  
 ACCCGTCAGCGGGGGCTTTCAATTGGGGCTCGTCCGGATCGGAGACCCCTGCCAG  
 GGACCACCGACCCACCCACCGGAGGTAAAGCTGGCTGCCCGTTCGGTATGACGG

TGAAAACCTCTGACACATGCAGCTCCGGAGACGGTCACAGCTTGTCTGTAAGCGGATGC  
 CGGGAGCAGACAAGCCCGTCAGGGCGCGTCAGCGGGTGTGGCGGGTGTGGCGGCAGC  
 CATGACCCAGTCACGTAGCGATAGCGGAGTGTATACTGGCTTAACATGCAGCATCAGAG  
 CAGATTGTAAGTGGAGTCACCATATGGGTGTGAAATAACCGCACAGATGCGTAAGGAGA  
 5 AAATACCGCATCAGGCCTCTCCGCTTCTCGCTCACTGACTCGCTCGCTCGGTGTT  
 CGGCTGCGCGAGCGGTATCAGCTCACTCAAAGCGGTAAACGGTTATCCACAGAACATCA  
 GGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAA  
 AAGGCCCGTGTGGCTGGCTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAAT  
 10 CGACGCTCAAGTCAGAGGTGGCGAAACCGCACAGGACTATAAAGATACCAAGGGTTC  
 CCTGGAAGCTCCCTGTCGCTCTCCTGTTCCGACCCCTGCCGCTTACCGGATACCTGTCC  
 GCCTTCTCCCTCGGGAAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGT  
 TCGGTGTAGGTCGTCGCTCCAAGCTGGGCTGTGTGACGAACCCCCCTCAGCCGAC  
 CGCTGCCTTATCCGTAACTATCGTCTTGAATCCTCAAGACACGACTTATCG  
 15 CCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCAGGTGCTACA  
 GAGTTCTGAAAGTGGTGGCTAACACTACGGCTAACACTAGAAGGACAGTATTGGTATCTGC  
 GCTCTGCTGAAGCCAGTTACCTCCGAAAAAGAGTTGGTAGCTCTGATCCGGAAACAA  
 ACCACCGCTGGTAGCGGTGGTTTTTTGTTGCAAGCAGCAGATTACGCGCAGAAAAAA  
 GGATCTCAAGAAGATCCTTGATCTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAAC  
 TCACGTTAAGGGATTTGGTCATGAGATTATCAAAAGGATCTCACCTAGATCCTTTA  
 20 AATTAAAAATGAAAGTTAAATCAATCTAAAGTATATGAGTAAGTAACTGGTCTGACAGT  
 TACCAATGCTTAATCAGTGAGGCACCTATCTCAGCAGTCTGTCTATTCTGTTCATCCATA  
 GTTGCCTGACTCCCCGTCGTGTAGATAACTACGATACGGGAGGGCTTACCATCTGGCCCC  
 AGTGCCTGCAATGATACCGCAGACCCACGCTCACCGGCTCCAGATTATCAGCAATAAC  
 CAGCCAGCCGAAGGGCCGAGCGCAGAAGTGGTCTGCAACTTATCCGCTCCATCCAG  
 25 TCTATTAAATTGTTGCCGGGAAGCTAGAGTAAGTAGTTGCCAGTTAATAGTTGCGCAAC  
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 GTTAGCTCCTCGGTCTCGATCGTGTCAAGTAAGTTGGCCAGTGTATCACT  
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 30 GTGACTGGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCCGACCGAGTTGC  
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 AGTTGATGTAACCCACTCGTGCACCCACTGATCTCAGCATTTTACTTTACCCAGC  
 GTTCTGGGTGAGCAAAACAGGAAGGAAATGCCGCAAAAAGGGATAAGGGCGACA  
 35 CGGAAATGTTGAATACTCATACTCTCTTCAATATTATTGAAAGCATTATCAGGGT  
 TATTGTCTCATGAGCGGATAACATATTGAATGTTAGAAAAATAACAAATAGGGTT  
 CGCGCACATTCCCCGAAAAGTGCCACCTGACGTCTAAGAAACCATTATTATCATGACA  
 TTAACCTATAAAATAGGCATACGAGGCCCTTGTCTTCAAGAATTACGATACCCAGAT  
 CACCGAAAATGTCCTCCAAATGTGTCACACTCCAAATTGCCGCTTCTGCC  
 40 TCTTAGACCACTCTACCCATTCCCCACACTCACCGGAGCCAAGGCCGCCCCCTCCGTT  
 TTCTTGCTTTGAAAGACCCACCGTAGGTGGCAA